

ENVIRONMENTAL TOXICOLOGY

1	Course Title:	ENVIRONMENTAL TOXICOLOGY
2	Course Code:	CEV5308
3	Type of Course:	Optional
4	Level of Course:	Second Cycle
5	Year of Study:	1
6	Semester:	2
7	ECTS Credits Allocated:	6.00
8	Theoretical (hour/week):	3.00
9	Practice (hour/week):	0.00
10	Laboratory (hour/week):	0
11	Prerequisites:	None
12	Language:	Turkish
13	Mode of Delivery:	Face to face
14	Course Coordinator:	Dr. Öğr. Üyesi SEVİL Ç. ELEREN
15	Course Lecturers:	Yok
16	Contact information of the Course Coordinator:	Yrd. Doç. Dr. Sevil ÇALIŞKAN ELEREN sceleren@uludag.edu.tr 224 2942115 Uludağ Üniversitesi, Müh.-Mim. Fakültesi, Çevre Mühendisliği Bölümü.
17	Website:	
18	Objective of the Course:	To give students general information related to Environmental toxicology. To teach the students the harmful effects of chemicals on ecosystems and organisms.
19	Contribution of the Course to Professional Development:	
20	Learning Outcomes:	
	1	After the completion of the course, the student will be able to define the environmental toxicology and the toxic pollutants.
	2	After the completion of the course, the student will be able to define the application areas of the ecotoxicology.
	3	After the completion of the course, the student will be able to evaluate the effects of the toxic chemicals on organisms.
	4	After the completion of the course, the student will be able to define the impact mechanisms of pollutants.
	5	After the completion of the course, the student will be able to carry out ecotoxicological analysis by applying toxic substances to organisms.
	6	After the completion of the course, the student will be able to conduct identification studies of toxicology and risk analysis studies.
	7	
	8	
	9	
	10	
21	Course Content:	
	Course Content:	

Week	Theoretical	Practice		
1	Instruction of the contents of the course. General information about the Environmental toxicology.			
2	Toxic doses, exposure to different toxicity types, dose - response, toxicity tests, Biomonitoring: biomarkers and bioindicators used in aquatic systems .			
3	Classification of toxic substances. The effects of toxic substances. Mechanisms of toxic effects .			
4	Environmental pollutants and environmental impacts to the ecosystem, environmental toxicology and toxicological risk assessment of chemicals.			
5	Toxicology of solids : pesticides, herbicides,			
6	Toxicology of solids : PCBs, PAHs ,			
7	Toxicology of solids : heavy metals ;			
8	Water toxicology: aquifers and open systems , nitrate, sulfur compounds , water quality measurements;			
9	MID-TERM EXAMINATION			
10	Air toxicology: the ozone layer, the overall air pollutants , acid rain			
11	Indoor pollution: public / private indoor toxic			
Activites		Number	Duration (hour)	Total Work Load (hour)
14	Multidisciplinary approach to environmental protection	14	3.00	42.00
Practicals/Labs		0	0.00	0.00
22	Textbooks, References and/or Other Materials	- Toksikoloji, Prof.Dr.İsmail Dökmeçi, Uzm.Kim. Mustafa Handan Dökmeçi, Nobel Kimya (2005)	3.00	9.00
Homeworks		0	0.00	0.00
Projects		Handbook of Ecotoxicology, Lewis Publishers (2003). Tokarzewski (Ed), Principles of Environmental	0.00	0.00
Field Studies		0	0.00	0.00
Midterm exams		-Connell D, Lam P, Richardson B, Wu R (Eds): Introduction to Ecotoxicology, Blackwell Science (1999)	22.00	22.00
Others		0	0.00	0.00
Final Exams		Effects, Environmental Fate and Risk Assessment, 2nd Edition, Taylor & Francis, Washington, DC, U.S.A.	42.00	42.00
Total Work Load				184.00
Total work load/ 30 hr		Management, Lewis Publishers?Inc., Chelsea, USA. Carriques P, Barth H, Walker C'h, Narbonne J.F		6.13
ECTS Credit of the Course				6.00
		Approach, Elsevier Science, Amsterdam. -Walker, C.H., Hopkin, S.P., Sibly, R.M., Peakall, D.B. Principles of Ecotoxicology, Third Ed., CRC Press, 2005. -Cockerham L.G., Shane B.S. (1993) Basic Environmental Toxicology -Wright, D.A., Welbourn, P. (2002). Environmental Toxicology (Cambridge Environmental Chemistry Series). -Sofield, R.M., Yu, MH.(2010) Introduction to Environmental Toxicology: Molecular Substructures to Ecological Landscapes.		
23	Assesment			
TERM LEARNING ACTIVITIES		NUMBE R	WEIGHT	
Midterm Exam		1	40.00	
Quiz		0	0.00	

Home work-project	0	0.00
Final Exam	1	60.00
Total	2	100.00
Contribution of Term (Year) Learning Activities to Success Grade	40.00	
Contribution of Final Exam to Success Grade	60.00	
Total	100.00	
Measurement and Evaluation Techniques Used in the Course		
24	ECTS / WORK LOAD TABLE	

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ10	PQ11	PQ12	PQ13	PQ14	PQ15	PQ16
ÖK1	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
ÖK2	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0
ÖK3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0
ÖK4	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0
ÖK5	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0
ÖK6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0
LO: Learning Objectives PQ: Program Qualifications																
Contribution Level:	1 very low		2 low		3 Medium		4 High		5 Very High							